

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A UV radiation curable primer coating composition comprising:

- a. 5 to 50 % by weight of one or more compounds containing one ethylenically unsaturated free-radically polymerizable group per molecule;
- b. 5 to 50% by weight of one or more compounds containing two or more ethylenically unsaturated free radically polymerizable groups per molecule;
- c. 1.0 to 60% by weight of one or more pigments, fillers and/or dyes;
- d. 0.1 to 0.49% ~~0.95 %~~ by weight photoinitiators;
- e. 0 to 20% by weight of volatile organic solvent; and
- f. 0.1 to 10% by weight of additives,

wherein said coating is curable to a non-tacky surface under only UVA radiation emitting lamp within 2 minutes and in sunlight within 5 minutes.

2. (Previously Presented) A primer coating composition according to claim 1 wherein the compound (a) is selected from the group consisting of 1-octene, 1-hexene, 1-decene, vinyl acetate, styrene, alpha-methylstyrene, p-methylstyrene, esters of methacrylic acid, esters of acrylic acid and mixtures thereof.

3. (Previously Presented) A primer coating according to claim 1 wherein compound (a) is selected from the group consisting of butyl acrylate, t-butyl acrylate, isobornyl acrylate, isodecyl acrylate, 2-ethylhexyl acrylate, lauryl acrylate, cyclohexyl acrylate, octyl acrylate and mixtures thereof.

4. (Previously Presented) A primer coating composition according to claim 1 wherein compound b is selected from the group consisting of urethane diacrylates, urethane triacrylates, tetra-functional urethane acrylates, hexa-functional urethane acrylates and mixtures thereof.
5. (Previously Presented) A primer coating according to claim 1 wherein compound b is selected from the group consisting of hexanediol diacrylate, tripropyleneglycol diacrylate, trimethylolpropane triacrylate, alkoxyated trimethylolpropane triacrylate, pentaerythritol triacrylate, pentaerythritol tetraacrylate, dipentaerythritol hexaacrylate, unsaturated polyesters, and mixtures thereof.
6. (Previously Presented) A primer coating according to claim 1 wherein compound b is selected from the group consisting of di-functional, tetra-functional and hexa-functional urethane acrylates and mixtures thereof.
7. (Original) A primer coating composition according to claim 1 wherein the pigment to binder ratio is between 0.8 and 2.0.
8. (Original) A primer coating composition according to claim 1 wherein the pigment to binder ratio is between 1.2 and 1.8.
9. (Previously Presented) A primer coating composition according to claim 1 wherein the photoinitiator comprises a compound selected from the group consisting of acyl phosphine oxides and benzyl ketals.
10. (Original) A primer coating composition according to claim 1 wherein said coating is cured to a tack free surface by 5 minute exposure to outdoor light having an intensity of 45-65 mJoules/cm² and demonstrates 95% post humidity test adhesion.

11. (Currently Amended) A process for applying a primer coating composition to a substrate comprising:
- A. applying a UV radiation curable primer to a substrate; and
 - B. curing the primer with a source selected from the group consisting of one or more UV lamps having a UV-B:UV-A ratio of 1:1 or less, natural outdoor light having a wavelength between 320 and 430 nm, and mixtures thereof, to obtain a tack free surface after 2-5 minutes,
- wherein the UV radiation curable primer comprises:
- a. 5 to 50 % by weight of one or more compounds containing one ethylenically unsaturated free-radically polymerizable group per molecule;
 - b. 5 to 50% by weight of one or more compounds containing two or more ethylenically unsaturated free radically polymerizable groups per molecule;
 - c. 1.0 to 60% by weight of one or more pigments, fillers and/or dyes;
 - d. 0.1 to 0.49% ~~0.95 %~~ by weight photoinitiators;
 - e. 0 to 20% by weight of volatile organic solvent; and
 - f. 0.1 to 10% by weight of additives.
12. (Previously Presented) A process according to claim 11 wherein the coating applied comprises compound (a) selected from the group consisting of 1-octene, 1-hexene, 1-decene, vinyl acetate, styrene, alpha-methylstyrene, p-methylstyrene, esters of methacrylic acid, esters of acrylic acid and mixtures thereof.
13. (Previously Presented) A process according to claim 11 wherein the coating applied comprises compound (a) selected from butyl acrylate, t-butyl acrylate, isobornyl acrylate, isodecyl acrylate, 2-ethylhexyl acrylate, lauryl acrylate, cyclohexyl acrylate, octyl acrylate and mixtures thereof.

14. (Previously Presented) A process according to claim 11 wherein the coating applied comprises compound (b) selected from the group consisting of urethane diacrylates, tri-functional urethane acrylates, tetrafunctional urethane acrylates, hexa-functional urethane acrylates and mixtures thereof.
15. (Original) A process according to claim 11 wherein the coating applied comprises a pigment to binder ratio between 0.8 and 2.0.
16. (Original) A process according to claim 11 wherein the coating applied comprises a pigment to binder ratio between 1.2 and 1.8.
17. (Original) A process according to claim 11 wherein a UV light source is applied wherein the UVA intensity is from 0.8 to 1.6 Joules/cm², and the UVB intensity is from .001 to 0.5 Joules/cm².
18. (Original) A process according to claim 11 wherein the coating is cured under natural light conditions, said light providing an intensity of 5-100 mJoules/cm².
19. (Original) A process according to claim 11 wherein the substrate to which the coating is applied to a substrate comprising an automotive vehicle.
20. (Original) A process according to claim 11 wherein the coating process comprises application of the primer coating in the repair of an automotive vehicle.